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STATE OF MARYLAND

STATE PLANNING COMMISSION

FIRST REPORT

OF

MARYLAND MAPPING AGENCY

College Park, Maryland.

August, 1936.

STATE OF MARYLAND

STATE PLANNING COMMISSION

Joseph I. France
William L. Galvin
Nathan L. Smith
Helena Stauffer
Abel Wolman, Chairman

Thomas F. Hubbard, Associate Consultant

FIRST REPORT

OF

MARYLAND MAPPING AGENCY

College Park, Maryland.

Sub-Committee:

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E. B. Mathews
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H. W. Schaidt
J. W. Shirley
N. L. Smith
S. S. Steinberg, Chairman

S. S. Steinberg, Director, Maryland Mapping Agency.

C. B. Kegarice, Engineer in Charge.

Sponsored jointly by the Maryland State Planning Commission and the University of Maryland as a Works Progress Administration project.

August, 1936.

INTRODUCTORY STATEMENT

The reports issued by the Maryland State Planning Commission may in general be divided into two classes. The first comprised factual surveys, such as the "Population Studies", or the "Ten Years Expenditures for Public Works"; and the second included, in addition to the presentation of facts, suggested remedies or treatments for the conditions reported.

This report is the first to be issued dealing with a condition which the Maryland State Planning Commission is able to meet without the need of legislative action. There are approximately two score agencies making maps in Maryland. The absence of past coordination among these agencies, duplication of effort and inconsistencies in maps for the same areas have resulted. Each map has been indexed and filed by the agency responsible. A central clearing house has never existed where a record of all the maps was available. In addition, confusion in use, due to the lack of fixed datum planes, was frequently encountered. Within the City of Baltimore there have been as many as four different elevations assumed as mean sea level.

As a result of the above conditions, the use of maps in Maryland has been made unnecessarily difficult. To remedy this situation, the Maryland State Planning Commission, with the Cooperation of the University of Maryland and the Works Progress Administration, has developed the Maryland Mapping Agency. As outlined in detail in the body of the report, the purpose of this agency is to standardize the making of maps in Maryland and to establish a central office from which any map desired may be secured. The agency has been in operation less than six months, but it has already attracted the attention of other states, which, realizing the existence of similar conditions, have studied Maryland's program.

While the funds necessary for the operation of the agency have been provided by the Works Progress Administration, it is the belief of the Maryland State Planning Commission that the service rendered by the Maryland Mapping Agency will prove itself of such value that the agency should ultimately be supported by the State of Maryland.

Abel Wolman

Abel Wolman, Chairman
Maryland State Planning Commission

The Maryland Mapping Agency, sponsored jointly by the Maryland State Planning Commission and the University of Maryland, was inaugurated on February 13, 1936. as a Works Progress Administration project, at College Park, Maryland, with an office in the Engineering Building of the University of Maryland. Professor S. S. Steinberg is Director and C.B. Kegarice formerly Chief Computer on the local Control C. W. A. Project in Maryland, is Engineer in Charge.

PURPOSES AND FUNCTIONS

The purpose of this work is to collect and correlate at one agency all the maps of Maryland and its sub-divisions made by federal, state, municipal, metropolitan, corporate and private agencies, so that there will be one central point where all information concerning maps of Maryland will be available, and duplication and overlapping in work of the future may be eliminated. The advantages of this Agency to the engineers of the State are as follows: First, an engineer will be able to learn from a visit to the Agency just what maps are available to the territory in which he is directly interested; second, he can at once determine the exact value of such maps; third, he can, after determining the map or maps suitable to the project at hand, learn the exact department from which they may be obtained.

As the Agency develops it is hoped that a number of copies of each map may be available for sale or distribution.

The other purposes and functions of this agency as originally outlined are as follows:-

1. To coordinate the efforts of the many agencies, federal, state, city, county, and private, making surveys and maps in Maryland, in order to avoid duplication and overlapping.

2. To develop permanent records of surveys and maps in the State.

3. To develop uniform specifications for surveying and mapping.

4. To collect and preserve all worth-while survey data, thereby salvaging for future use much valuable information now being lost; and to transcribe information to a master map.

5. To encourage engineers and surveyors to tie their surveys into the horizontal and vertical local control network of the U.S. Coast and Geodetic Survey thereby making their lines practically indestructible.

6. To encourage engineers and surveyors to adopt the use of the single plane coordinate system now being developed in Maryland, for engineering projects, for municipal and county boundaries and for private property surveys.

7. To become a depository for file copies of Maryland maps made by all

agencies and to establish a Library of Maps and Charts of the State.

8. To serve as an information bureau concerning maps of the State or any portion thereof; to retail standard maps such as are in general demand; and, to a limited extent, reproduce maps for a reasonable charge.

9. To serve annually as a central meeting point for representatives of Maryland map making organizations to discuss, coordinate and plan for mapping of the State; to direct the trend of surveys and maps of the State; and to advocate consolidation of State mapping bureaus to promote efficiency.

10. To promote the continuation and completion of the local control surveys begun in Maryland under the C. W. A. ; to serve as coordinating agency for the ten-year program of mapping about to be launched by the Federal government; and to determine priorities.

11. To sponsor legislation for the protection of survey monuments.

12. To sponsor legislation permitting entry of surveyors on to private property for purpose of using geodetic survey stations.

13. To sponsor legal recognition in Maryland of single plane coordinate system that ties with the U. S. Coast and Geodetic Survey net.

14. To sponsor the legal adoption of the Torrens system of land title registration.

15. To acquaint engineers, surveyors and the general public, by means of proper publicity, of the services available through the proposed agency.

PERSONNEL

The personnel of the Agency at present consists, in addition to the Director and the Engineer in Charge, of the following men:

Clark, Carroll,	Anne Arundel County, Senior Draftsman, Reported on May 26.
Dunn, J. B.,	Anne Arundel County, Transitman, Reported on May 26.
Luckett, John F.,	Prince George's County, Senior Draftsman, Reported on May 28.
McAdoo, Arthur,	Howard County, Senior Draftsman, Reported on May 27.
Oberndorf, Wm. A.	Anne Arundel County, Senior Draftsman, Reported on May 26.
Phillips, R. E.,	Prince George's County, Draftsman, Reported on February 17.
Shisler, W. E.,	Prince George's County, Draftsman, Reported on February 13.

LOCAL CONTROL SURVEY

To use these men it was necessary to organize, in cooperation with the U. S. Coast and Geodetic Survey, a field party on Local Control Surveys, a continuation of the work started under the C. W. A.. This work is now being carried on in the following states: Massachusetts, Connecticut, New Jersey, North Carolina, Oklahoma, Alabama, Louisiana, Florida, New York,

[illegible] promotes and to establish a library, if [illegible] and [illegible] the [illegible].

8. To serve as an in [illegible] portion thereof; to [illegible] to a liberal [illegible].

9. To serve [illegible] [illegible] of the State; to [illegible] advocate [illegible].

10. To promote [illegible] begun in [illegible] the ten-year [illegible] ment; and to [illegible].

11. To sponsor [illegible].

12. To sponsor [illegible] property [illegible].

13. To sponsor [illegible] system [illegible].

14. To sponsor [illegible] registration [illegible].

15. To [illegible] proper [illegible].

PERSONNEL

The Director [illegible]

Clerk, [illegible]

Dunn, [illegible]

Lucchetti, [illegible]

McLaco, [illegible]

Oberndorf [illegible]

Phillips, [illegible]

Shialer, [illegible] supported on

LOCAL CONTACT [illegible]

[illegible] the U. S. [illegible] in [illegible] tion with a continuation of the [illegible] Fish [illegible] Federal Fishery Service, [illegible] Dept [illegible]. This work is now being carried on in [illegible] Local [illegible] Connecticut, New Jersey, North Carolina, [illegible], Illinois, Florida, New York.

Georgia, and South Carolina under the Works Progress Administration. To make this field work possible it was necessary to have transportation to take the men from the office at College Park to the field. A contract for gasoline and oil was approved on May 8, 1936 and courtesy cards obtained on May 11.

The equipment necessary to carry on this work has been borrowed as follows:

From the U. S. Coast and Geodetic Survey:-

1-100 foot standardized tape.
2-100 foot steel tapes with reels.
2-8 oz. plumb bobs.
1-hand Locke level.
1-reading glass.
1-thermometer.

From the U. S. Geological Survey:-

1-transit and tripod.

All of the above equipment was received on June 5, 1936.

Minor equipment such as level rod, axe, hammers, machette, shovel, bar, sight rods, sight rod tripods, chaining stools, station markers and concrete monuments are those used on the Local Control Survey under the C.W.A. and which had been carefully stored here at the University.

Due to the small personnel and the limited transportation facilities it has been decided to do this field work at vantage points near the office by a continuation of survey lines already run and over monuments in place, the latter having been previously set but not tied in, due to the abrupt closing of the C.W.A. work. These lines are all within reasonable distance from both the homes of the men and the office. The line on which the men are now working is between the U.S.C. and G. S. Triangulation stations Harrison and White Marsh along the Crain Highway, State Route #3.

Note: The method of procedure and a detailed account of this work will be covered in the next report.

COOPERATION RECEIVED

Appended to this report is an index of the maps that have been assembled to date and also the name of the agency publishing them. These maps have been collected by the Engineer in Charge who, until the signing of the gas and oil contract, furnished his own transportation.

It must be remembered that this is a "work project" and that there is no money available with which any map or maps may be purchased. The maps now on file have been contributed by the various agencies publishing them and it is their full cooperation and generosity that has made possible the results shown by this report.

MOUNTING NECESSARY

These maps are printed on paper and it will be noted from the

index that the sizes vary. Some are large and unwieldly and easily torn with a slight handling. In view of the fact that the maps are to be used for permanent record it was necessary to mount the maps on linen or cotton goods.

MAP MOUNTING METHODS

In order to determine the different methods of mounting maps used by the various mapping organizations, a careful study was made of the U. S. Coast and Geodetic Survey; Maryland Geological Survey; Baltimore City; etc.. The elaborate equipment of the U. S. Geological Survey as well as the more moderate equipment of the Baltimore City was noted. Attention was also given to the various ways of pasting and the different kinds of paste used. Flour paste is generally used, but Baltimore City uses a vegetable paste. The kind of material used for backing also varies from linen to sheeting or muslin. Adequate equipment is most essential in order to obtain the best results and that being used on our work, while not expensive or elaborate, is serving the purpose very well.

MOUNTING EQUIPMENT AND MATERIALS

The tables used were furnished by the University of Maryland and are of the conference type. The tops of the tables were not sufficiently smooth or large to use for mounting as they were. To provide sufficient width, two pieces of ply board, size 8'x4'x$\frac{1}{4}$', were procured. The next problem was to determine a way by which the material could be stretched and held taut throughout the entire process of pasting and drying. For this equipment two heavy curtain stretchers opening to 5'x12' were acquired. These are serving the purpose with the best results. The rapidity and ease with which the material can be fastened to the frame is an important item where such a large number of maps must be mounted.

The material specified for the backing was not available locally so Pequot Sheeting for the 42-inch width and three orange white sheeting for the 36 inch width were substituted. The procedure to be described has been worked out in accordance with the material used. The backing material used will necessarily have to be taken into consideration both in the stretching and in the consistency of the paste.

The majority of the maps so far have been of a width which could be mounted on one of the two widths furnished. Where maps of greater width were to be mounted the material for backing them was first sewed on a sewing machine to make the required width. This sewing was done during the evening, at the home of one of the men. With the exception of a very slight rise caused by the seam, the results have been quite satisfactory.

The remainder of the equipment in use consists of two 10-quart galvanized water pails, paperhanger's paste brush, paperhanger's trimming knife, and most important a rubber roller taken from a standard wash wringer.

PREPARATION FOR MOUNTING

The procedure found to be efficient is described as follows:

The frame is placed in a horizontal position on the ply board, which is on the top of the table, and has been raised with wooden strips at the center and end of each board to overcome the thickness of the center brace.

on the stretcher. This center brace then drops through the opening between the two ply boards and a continuous surface is obtained throughout.

The backing material of the desired width is then put on the stretchers by pinning down one side and up the opposite side. The frames are then stretched transversely until the goods is taut before the ends are pinned. The goods is then pinned to the ends of the stretchers by pulling the desired tensions by hand before fastening.

In mixing the paste two different consistencies are used; one mixture is very thin, having only enough paste to size the material without any perceptible coating, and the other is a rather thick mixture. The paste after mixing may be used for several days, unless it turns sour, which frequently happens during hot weather.

PASTING AND MOUNTING

The process of pasting and mounting used is as follows: First: the backing material, after it has been fastened to the frame is sized with the thinner paste, being sure that it has been covered entirely and that no dry spots show. Second, the map to be mounted is then taken to the pasting table and a thick coating of the heavier paste is thoroughly brushed on the back. Large maps may be folded back on the paste side for ease in handling. Third, the map so pasted is carried to the mounting frame, and preferably with the assistance of an additional man, the edge of the map is placed on the sized material at a distance of about 4 inches and parallel to the end of the frame. This is important in mounting large maps in order that when the map is rolled down it will be parallel with the sides of the frame and approximately the same distance from them. However, it is possible to be as close as 2 inches to the sides of the frame due to the side pieces being under the end pieces. The next step is to follow through with the roller and lower the map, but keeping in tension all the time, until the entire map is flat and in the correct position. Fourth, the roller is now used rolling in a direction from the center to all four edges. Should there be any appreciable wrinkle due to the difference in the shrinkage of the map and the material, it must be permitted to partially dry and then rolled with a small roller toward the edge and along and in the direction of the wrinkle.

The framework of the curtain stretchers is a little light for this work but this difficulty has been overcome by the use of an extra strip in the middle of each half of the frame. By fastening one end with a bolt and the other with a clamp the side pieces may be aligned and kept stiff and rigid until the maps are thoroughly dry.

DRYING

With this portable method of mounting the frame and maps may be picked up and placed along a wall out of the way until the maps are dry and ready to be cut out of the frame. The time required for drying will vary somewhat depending on the atmospheric conditions and the temperature of the room. In most cases it will require a minimum time of eight hours for small maps and twenty-four hours for larger maps to dry sufficiently to maintain a smooth even surface when they are trimmed.

TRIMMING

The method of trimming is important only in order to obtain a

smooth straight edge. A soft pine board is used upon which the trimming is done with the point of a paperhanger's trimming knife cutting along a steel straight edge. Care must be exerted to cut against or a little distance on the paper map. In no case should the backing be cut at any distance from the map.

CONTACTS WITH ORGANIZATIONS

On April 24, 1936 the following letter was mailed to the Town Clerk of 131 Towns and Cities in the State:-

Dear Sir:

You will be interested to know that the Maryland Mapping Agency, sponsored jointly by the Maryland State Planning Commission, and the University of Maryland has been inaugurated as a Works Progress Administration project. The office is located in the Engineering Building at College Park.

The purpose of this work is to collect and correlate at one agency the maps of Maryland and its sub-divisions made by federal, state, municipal and private agencies, so that there will be one central point where all information concerning maps of Maryland will be available, and duplication and overlapping in work of the future may be eliminated.

In this work we are including all incorporated cities and towns and are acquiring as we go along the maps of these areas, showing the corporate limits, streets and other pertinent information, together with a map or description of municipal parks, water works or other properties that may be outside of the limits. If these maps are not available in published form we will greatly appreciate your sending us a print, legal description or other data covering them.

Your cooperation in this project will permit us to establish an agency with such information concerning the maps of Maryland and its subdivisions as will be extremely helpful in the solution of all problems for which map information is basic.

Sincerely yours,

(Signed) S. S. Steinberg
Director

The response has been very gratifying so far. Due to the spring elections there have been a number of changes in officials since the letter has been sent out. No doubt, many more replies will come in after these new officials take office.

One very important result of this correspondence has been the fact that this letter has caused a great many of these towns having no official map, to take steps to have one made.

The Departments of the state government, larger cities, metropolitan areas and utility corporations, are being contacted personally by the Engineer in Charge. The following Departments or Agencies of the Federal Government that are represented by individual members appointed by the heads of their respective agencies to make up the Federal Board of Surveys and Maps established by Executive Order No. 3206, December 30, 1919 will be

visited in the near future. The number of these organizations contacted to date is 160.

1. Corps of Engineers, War Department.
2. United States Coast and Geodetic Survey, Department of Commerce.
3. United States Geological Survey, Department of the Interior.
4. General Land Office, Department of the Interior.
5. Division of Topography, Post Office Department.
6. Bureau of Chemistry and Soils, Department of Agriculture.
7. Bureau of Reclamation, Department of Interior.
8. Office of Indian Affairs, Department of the Interior.
9. Bureau of Public Roads, Department of Agriculture.
10. Mississippi River Commission, War Department.
11. United States Lake Survey, War Department.
12. International (Canada) Boundary Commission, Department of State.
13. Forest Service, Department of Agriculture.
14. United States Hydrographic Office, Navy Department.
15. Military Intelligence Division, General Staff, War Department.
16. Federal Power Commission.
17. Bureau of Aeronautics, Navy Department.
18. Air Corps, War Department.
19. Bureau of Air Commerce, Department of Commerce.
20. Geographic Section, Department of State.
21. Division of Maps, Library of Congress.
22. Bureau of Lighthouses, Department of Congress.
23. Tennessee Valley Authority.
24. Soil Conservation Service, Department of Agriculture.

On April 14, 1936 Professor S. S. Steinberg, the Director, addressed the regular meeting of the above Federal Board outlining the work being done by the Maryland Mapping Agency and setting forth the purposes in detail. This address was printed in the minutes of the meeting which are issued in pamphlet form.

RECOGNITION OF PROJECT

It is interesting to note that the project has already received very favorable comment not only in Maryland but also in other states. These pioneer efforts in this field have been recognized by inquiries from the States of Massachusetts and California expressing a desire for information which would enable them to inaugurate similar projects in these states.

OFFICE AND FURNITURE

The room in which this work is being conducted, is located on the second floor of the Engineering building at the University of Maryland. It is 24 feet square, well provided as to heat or ventilation, and with plenty of windows for an abundance of daylight. The artificial light, when needed, is excellent.

The furniture supplied by the University of Maryland consists of a flat top desk, two four drawer high steel letter filing cabinets, two conference tables each 8 feet long, one conference table 14 feet long which has been raised to drawing table height, two drawing tables, one small table,

stationary wall shelves for books, one roll rack four shelves high, two large drawer map filing cabinets, one four section or sixteen drawers high and one eight drawers high, chairs, stools for the drawing tables, waste baskets and letter trays.

PROGRESS

The total number of maps now on hand is 398 of which 239, principally the smaller ones, have been mounted. Although this represents about 60% of the number to be mounted it is less than 50% of the work required. This is due to the fact that the capacity of the frames will permit the mounting each day of not more than three or four large maps.

The geographic positions of the triangulation stations of the U.S. Coast and Geodetic Survey in Maryland requiring 134 sheets and containing in all 843 stations, listed in the index, have been mounted and bound in a $5\frac{1}{4}$"x$9\frac{1}{2}$" looseleaf book. With this information has been included a separate typewritten index in which the stations are listed alphabetically with line and page for ready reference.

The plane coordinates for Maryland as computed by the U.S. Coast and Geodetic Survey, and consisting of 104 of the above geographic positions, are also on file here in the office and available for the use of local engineers. It is the intention to mount the sheets and bind and index in the same manner as above.

A photo print of a map of the States of Maryland and Delaware, scale 8 miles equal one inch, size 35x21 inches, on which the triangulation network of the U. S. Coast and Geodetic Survey is graphically shown, has been mounted and is now on file.

The sub-division or development plats, located in the counties, are just beginning to be collected and are noted in the index. Some of these have been traced and others are prints provided by the developer or sales agent. This part of the work will be very valuable in bringing the various maps up to date.

INDEXING AND FILING

The method of indexing and filing used is most important for any agency of this kind. Considering the purposes and functions of the Agency, it is essential to adopt a system that will permit growth with the expansion of the Agency.

STUDIES MADE OF SYSTEMS IN USE

A study was made of the filing systems now in use by the Federal Board of Surveys and Maps; Division of Maps, Library of Congress; U.S. Geological Survey, Department of Interior; Graphic Section, War College; Maryland Geological Survey; Maryland State Roads Commission; Bureau of Plans and Surveys, Baltimore City; and Pennsylvania Water & Power Company. Attention was also given to the Williams System of Indexing published by the War College.

Two distinct and individual types of indexing and filing

are described below in order to point out, first, the simplicity and regularity with which maps of the same kind and size are indexed and filed by the U. S. Geological Survey; and second, the more difficult problem involved with maps of so many different kinds and sizes which are indexed and filed by the Federal Board of Surveys and Maps.

The index of the U. S. Geological Survey Topographic sheets or Quadrangles is shown with different colors depicting the various stages of work, from beginning to completion, on a large wall map of the United States about 8x12 feet in size. The working index is on a smaller sheet, which shows the outline and name of the sheet of quadrangle with a legend indicating their status from survey to publication.

For ready reference the quadrangle sheets are mounted and bound in books which in turn carry a special index sheet for a larger area than that covered by a quadrangle sheet. This number is on the tab of the first quadrangle sheet in the area so indexed.

The quadrangle sheets are filed in paper folders in a cabinet having very low drawers, approximately 2 inches in height and having a board table which pulls out about desk height serving for a table on which to open the folder and inspect the quadrangle sheets.

The index used by the Federal Board of Surveys and Maps is of both the sheet and the card type. The special index as published by the individual agency, is used for the Federal Department maps and there are no copies on file. For the maps of any other agency a card index is used which is cross indexed under the different headings, such as, Name, Country, and State. The information on the cards is very complete and in sufficient detail to enable the choice of the exact map required. It will be noted that the system adopted by the Maryland Mapping Agency for indexing and filing follows in part both of the above types.

SYSTEM ADOPTED

The system of indexing and filing adopted is partially described as follows:

Bearing in mind the public nature of this Agency and the need for convenience in filing for both the Engineer and the general public it has been decided to make a wall index map showing the exact location of as many of the maps as possible.

To accomplish this purpose, a map published by the Maryland Geological Survey, scale one inch equals five miles, size 52x36 inches, is mounted and used as a base. A detailed description of one of these maps is as follows:

The wall index map for the U. S. Geological Survey topographic sheets is marked in rectangles corresponding to the outline of the quadrangle or sheet. The name of the quadrangle is printed in bold type, sloping upwards from the lower left to the upper right hand corner of the rectangle, together with the number of the drawer in which the sheet is filed. The numbering begins with number one in the most northwestern sheet and progresses south to include all the sheets necessary to cover from the north to the south limits of the state at this location. The next consecutive number is used for the northernmost sheet in the next adjoining row of quadrangles. The numbering proceeds in this manner,

always increasing in numbers from north to south, until all the quadrangles necessary to cover the entire state are numbered. The fact that the sheets along the borders overlap into the adjoining states is disregarded. The map is then labeled with a suitable title and is ready to hang.

In addition to the above, a wall index map will be made for the various sets of maps. To date these maps are being made to cover the following:

U. S. Coast and Geodetic Survey - showing the outline of the coast and harbor charts.
Maryland State Roads Commission - showing the outline of the county Sectional maps.
Aerial Surveys - showing areas that have been so mapped, each area shaded in color to correspond with legend giving names and details.
County Symbols- showing the symbol or abbreviation for each County reference to all permanent monuments or points of the Local Control Survey:

County	Symbol or Abbreviation
Allegany	AL
Anne Arundel	AA
Baltimore	BA
Calvert	CA
Caroline	CN
Carroll	CR
Cecil	CE
Charles	CH
Dorchester	DO
Frederick	FR
Garrett	GA
Harford	HA
Howard	HO
Kent	KE
Montgomery	MO
Prince George's	PG
Queen Anne's	QA
Somerset	SO
St. Mary's	SM
Talbot	TA
Washington	WA
Wicomico	WI
Worcester	WO

A card index is necessary for all maps, even those shown on a wall index map. It is essential to have listed on each card as much of the information as is available pertaining to the map it indices. With the aid of the investigation and preliminary study the following outline has been adopted;

INDEX NO. _____

NAME _____
COUNTY _____ STATE _____
ELECTION DISTRICT _____
LOCATION _____ (LAT.) _____ (LONG) _____
COORDINATES _____ (X) _____ (Y) _____
AREA _____
SCALE _____
PROJECTION _____
DIMENTIONS _____
HORIZONTAL DATUM _____ (CONTROL) _____
VERTICAL DATUM _____ INTERVAL _____
SURVEYED _____
RESURVEYED _____
COMPILED _____
REVISED _____
PUBLISHED _____
REPRINTED _____
PUBLISHED BY _____

(Additional data on reverse side) FILED _____

It is the intention of the Maryland Mapping Agency not only to make the index cards for each and every map on file, but to make an index card for existing Maryland Maps which could not be secured by the agency.

The index cards are made out and indexed alphabetically under the following headings:

Name, as topographic, geological, harbor, forest, etc.
County or City.
Agency, whether Federal, State, Corporate or private.
Miscellaneous, out of State, etc.

The abbreviations or symbols designating Counties are listed above and the abbreviation or symbol for the kinds of map follow:

Aerial	A
Forest	F
Geological	G
Soils	S
Topography	T

Differentiation between a sheet map which is filed in a drawer and a roll map which is filed in a rack is shown by the use of the symbol D for drawer and R for rack.

The symbols AA - S - D 21 will designate for Anne Arundel County a soil map which is filed in drawer 21.

The indexing and filing outlined above, only in part, will no doubt be advanced enough to describe in detail in the next report.

MARYLAND MAPPING AGENCY
INDEX OF
MAPS AND PAMPHLETS ON HAND, JUNE 15, 1936.

MAPS

Note: The sizes shown below give first the width and then the height of the map relative to the title and lettering on it.

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DEPARTMENT OF INTERIOR, UNITED STATES GEOLOGICAL SURVEY. Topographic maps; the unit of which is a quadrangle, bounded by parallels of latitude and meridians of longitude; of nearly uniform size about 16½ by 20 inches.

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Two-mile scale (1:125000), Datum is mean Sea Level:

CHOPTANK - Edition of 1929, reprinted 1932, Contour interval 10 and 20 feet, Polyconic Projection, North American Datum.

DOVER - Edition of 1906, reprinted 1929, Contour interval 20 feet, Polyconic Projection.

FREDERICKSBURG - Edition of 1894, reprinted 1923, Contour interval 50 feet, Polyconic Projection.

HARPERS FERRY - Edition of 1893, reprinted 1930, Contour interval 100 feet, Polyconic Projection.

NOMINI - Edition of 1898, reprinted 1923, contour interval 20 feet.

PATAPSCO - Edition of 1908, reprinted 1934, Contour interval 20 feet, Polyconic Projection, North American Datum.

PATUXENT - Edition of 1908, reprinted 1934, Contour interval 20 feet, Polyconic Projection.

ST. MARY'S - Edition of 1908, reprinted 1934, Contour interval 20 feet, Polyconic Projection.

TOLCHESTER - Edition of 1908, reprinted 1934, Contour interval 20 feet, Polyconic Projection.

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One mile scale (1:62500), Datum is mean Sea Level:

ACCIDENT - Edition of 1900, reprinted 1933, Contour interval 20 feet Polyconic Projection, North American Datum.

ANNAPOLIS - Edition of 1904, reprinted 1930, Contour interval 10 and 20 feet, Polyconic Projection, North American Datum.

ANTIETAM - Edition of 1910, reprinted 1930, Contour interval 20 feet, Polyconic Projection, North American Datum.

BALTIMORE - Edition of 1904, reprinted 1924, contour interval 20 feet, Polyconic Projection, North American Datum.

BARCLAY - Edition of 1905, reprinted 1924, Contour interval 10 feet, Polyconic Projection, North American Datum.

BELAIR - Edition of 1901, reprinted 1929, Contour interval 20 feet, Polyconic Projection, North American Datum.

BETTERTON - Edition of 1900, reprinted 1931, Contour interval 20 feet, Polyconic Projection.

BLOODSWORTH ISLAND - Edition of 1903, reprinted 1927, no contours, Polyconic Projection, North American Datum.

BRANDYWINE - Edition of 1913, reprinted 1932, Contour interval 20 feet, Polyconic Projection.

CECILTON - Edition of 1900, reprinted 1934, Contour interval 20 feet, Polyconic Projection, North American Datum.

CHESTERTOWN - Edition of 1901, reprinted 1931, Polyconic Projection.

CRAPO - Edition of 1905, reprinted 1934, Contour interval 10 feet, Polyconic Projection, North American Datum.

CRISFIELD - Edition of 1903, reprinted 1920, no contours.

DAVIS - Edition of 1921, Contour interval 50 feet, Polyconic Projection, North American Datum.

DEAL ISLAND - Edition of 1903, reprinted 1927, Contour interval 10 feet, Polyconic Projection, North American Datum.

DENTON - Edition of 1905, reprinted 1927, Contour interval 10 feet, Polyconic Projection, North American Datum.

DRUM POINT - Edition of 1905, reprinted 1928, Contour interval 20 feet, Polyconic Projection, North American Datum.

ELK GARDEN - Edition of 1922, contour interval 50 feet, Polyconic Projection, North American Datum.

ELLICOTT - Edition of 1906, reprinted 1926, Contour interval 20 feet, Polyconic Projection, North American Datum.

ELKTON - Edition of 1900, reprinted 1932, Contour interval 20 feet, Polyconic Projection.

EMMITSBURG - Edition of 1911, reprinted 1924, Contour interval 20 feet, Polyconic Projection, North American Datum.

EWELL - Edition of 1917, Contour interval 10 feet.

FLINTSTONE - Edition of 1900, reprinted 1922, Contour interval 20 feet.

FREDERICK - Edition of 1909, reprinted 1931, Contour interval 20 feet, Polyconic Projection, North American Datum.

FROSTBURG - Edition of 1908, reprinted 1932, Contour interval 20 feet, Polyconic Projection.

GRANTSVILLE - Edition of 1904, reprinted 1927, Contour interval 20 feet, Polyconic Projection, North American Datum.

GREEN RUN - Edition of 1901, reprinted 1934, Contour interval 10 feet, Polyconic Projection.

GUN POWDER - Edition of 1901, reprinted 1930, Contour interval 20 feet, Polyconic Projection.

HAGERSTOWN - Edition of 1912, reprinted 1928, Contour interval 20 feet, Polyconic Projection, North American Datum.

HANCOCK - Edition of 1901, reprinted 1928, Contour interval 20 feet, Polyconic Projection, North American Datum.

HARRINGTON - Edition of 1918, Contour interval 10 feet.

HAVRE DE GRACE - Edition of 1900, reprinted 1931, Contour interval 20 feet.

HEATHSVILLE - Edition of 1917, Contour interval on land 10 and 20 feet changing on 20 foot contour, Contours off shore at depths of 5, 10, and 20 feet.

HURLOCK - Edition of 1905, reprinted 1928, Contour interval 10 feet, Polyconic Projection, North American Datum.

INDIAN HEAD - Edition of 1925, reprinted 1934, Contour interval 20 feet, Polyconic Projection, North American Datum.

Keyser - Edition of 1922, Contour interval 50 feet, Polyconic Projection, North American Datum.

LAUREL - Edition of 1926, reprinted 1932, Contour interval 20 feet, Polyconic Projection, North American Datum.

LEONARDTOWN - Edition of 1901, reprinted 1933, Contour interval 20 feet, Polyconic Projection.

MARTINSBURG - Edition of 1916, reprinted 1926, Contour interval 20 feet, Polyconic Projection, North American Datum.

MT. Airy - Edition of 1909, reprinted 1925, Contour interval 20 feet, Polyconic Projection, North American Datum.

NANJEMOY - Edition of 1913, Contour interval 20 feet.

NANTICOKE - Edition of 1903, reprinted 1922, Contour interval 20 feet.

NORTH POINT - Edition of 1904, reprinted 1935, Contour interval 20 feet, Polyconic Projection, North American Datum.

OAKLAND - Edition of 1900, reprinted 1921, Contour interval 20 feet, Polyconic Projection, North American Datum.

OCEAN CITY - Edition of 1901, reprinted 1921, Contour interval 10 feet.

OWENSVILLE - Edition of 1905, reprinted 1936, Contour interval 20 feet, Polyconic Projection.

OXFORD - Edition of 1904, reprinted 1927, Polyconic Projection, North American Datum.

PARKTON- Edition of 1902, reprinted 1927, Contour interval 20 feet, Polyconic Projection, North American Datum.

PAW PAW - Edition of 1900, corrected 1910, reprinted 1929, Contour interval 20 feet, Polyconic Projection, North American Datum.

PINEY POINT - Edition of 1901, reprinted 1927, no contours, Polyconic Projection, North American Datum.

PITTSVILLE - Edition of 1902, reprinted 1914, Contour interval 10 feet.

PRINCE FREDERICK - Edition of 1910, reprinted 1914, contour interval 20 feet, Polyconic Projection.

PRINCE FREDERICK - Advance sheet only. Resurvey.

PRINCESS ANNE - Edition of 1901, reprinted 1934, Contour interval 10 feet Polyconic Projection.

PT. LOOKOUT - Edition of 1912, reprinted 1932, Contour interval 20 feet, Polyconic Projection.

QUANTICO - Edition of 1927, Contour interval 20 feet, Polyconic Projection, North American Datum.

RELAY - Edition of 1907, reprinted 1913, Contour interval 20 feet, Polyconic Projection, North American Datum.

ROCKVILLE - Editions of 1923, reprinted 1928, Contour interval 20 feet, Polyconic Projection, North American Datum.

SALISBURY - Edition of 1901, reprinted 1928, Contour interval 10 feet, Polyconic Projection, North American Datum.

SEAFORD - Edition of 1915, Contour interval 10 feet.

SENECA - Edition of 1908, reprinted 1932, Contour interval 20 feet, Polyconic Projection, North American Datum.

SHARPS ISLAND - Edition of 1904, reprinted 1930, Contour interval 10 feet, Polyconic Projection North American Datum.

SNOW HILL - Edition of 1901, reprinted 1934, Contour interval 10 feet Polyconic Projection.

ST. MICHAELS - Edition of 1904, reprinted 1923, Contour interval 10 feet, Polyconic Projection, North American Datum.

TANEYTOWN - Edition of 1911, reprinted 1932, Contour interval 20 feet, Polyconic Projection, North American Datum.

UPPER MARLBORO - Advance sheet only.

WAKEFIELD- Edition of 1932, Contour interval 20 feet, Polyconic Projection, North American Datum.

WESTMINSTER - Edition of 1905, reprinted 1924, Contour interval 20 feet, Polyconic Projection, North American Datum.

WICOMICO - Edition of 1914, reprinted 1922, Contour interval 20 feet,

WILLIAMSPORT - Edition of 1912, reprinted 1924, Contour interval 20 feet, Polyconic Projection, North American Datum.

WYOMING - Edition of 1931, Polyconic Projection North American Daum, Contour interval 10 feet.

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One-half mile scale (1:31680) Datum is mean Sea Level:

WASHINGTON AND VICINITY - Edition of 1929, reprinted 1932, Contour interval 10 feet, Polyconic Projection.

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MARYLAND GEOLOGICAL SURVEY. Maps as designated, sized, scale and other information follow each individual listing below:

ALLEGANY COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 10 feet, Size 26x43 inches, 1916.
Forest Areas by Commercial Types - Scale 1:62500, Contour interval 20 feet, Size 45x24 inches, 1910.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1909.
Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 52x27 inches, 1924.

ANNE ARUNDEL COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 34x48 inches, 1913.
Forest Areas by Commercial Types - Scale 1:62500, Contour interval 20 feet, Size 36x48 inches, 1913.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1909.
Geological Formations - Scale 1:62500, Contour interval 20 feet, Size 34x48 inches, 1916.
Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet. Size 33x48 in., 1931.

BALTIMORE COUNTY.

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 36x47 inches, 1919.
Forest Areas by Commercial Types - Scale 1:62500, Contour interval 20 feet, Size 41x48 inches, 1914.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1910.
Geological Formations - Scale 1:62500, Contour interval 20 feet, Size 37x50 inches, 1925.
Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 41 x 49 inches, 1924 partially revised 1932.

CALVERT COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 28x41 inches, 1902.
Forest Areas by Commercial Types - Scale 1:87500, size 11x14 inches,1909.

Geological Formations - Scale 1:62500, Contour interval 20 feet, Size 28x41 inches, 1903.

Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 28x40 inches, 1932.

CAROLINE COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 10 feet, Size 26x43 inches, 1916.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1910.

Topographic and Election Districts - Scale 1:62500, Contour interval 10 feet, Size 26x43 inches, 1935.

CARROLL COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 32x30 inches, 1922.

Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches, 1911.

Geological Formations - Scale 1:62500, Contour interval 50 feet, Size 38x36 inches, 1928.
Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 38x36 inches, 1922.

CECIL COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 31x35 inches, 1902.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 in., 1911.

Geological Formations, - Scale 1:62500, Contour interval 20 feet, Size 31x35 inches, 1902.
Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 38x36 inches, 1930.

CHARLES COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 50x39 inches, 1922.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches, 1910.

Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 42x44 inches, 1914.

DORCHESTER COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 38x41 inches, 1926.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1910.

Topographic and Election Districts - Scale 1:62500, Contour interval 10 feet, Size 40x53 inches, 1928.

FREDERICK COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 36x41 inches, 1925.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1911.
Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, 1927. *Size 44x40 inches.*

GARRETT COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 34x39 inches, 1927.
Forest Areas by Commercial Types - Scale 1:62500, Contour interval 20 feet, Size 36x42 inches, 1913.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 in.,1909.
Geological Formation - Scale 1:62500, Contour interval 20 feet, Size 36x43 inches, 1902. (out of print)
Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet , 1902, Size 36x43 inches.

HARFORD COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 35x38 inches, 1920.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 in., 1909.
Geological Formations - Scale 1:62500, Contour interval 20 feet, Size 35x36 in., 1904.
Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 35x36 inches, 1927.

HOWARD COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 23x30 inches, 1920.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1907.

Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 40x27 inches, 1927.

KENT COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 36x35 inches, 1916.
Forest Areas by Commercial Types, -Scale 1:62500, Contour interval 20 feet, Size 35x35 inches, 1910.

Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches, 1907.
Geological Formations - Scale 1:62500, Contour interval 20 feet, Size 36x35 inches, 1915.
Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 40x35 inches, 1929.

MONTGOMERY COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 39x33 inches, 1916.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1910.
Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 41x48 inches, 1927.

PRINCE GEORGE'S COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 35x47 inches, 1913.
Forest Areas by Commercial Types - Scale 1:62500, Contour interval 20 feet, Size 32x47 inches, 1912.
Forest Areas by Commercial Type - Scale 1:87500, Size 11x14 inches, 1907.
Geological Formations - Scale 1:62500, Contour interval 20 feet, Size 33x47 inches, 1911.
Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 41x48 inches, 1927. (Out of print).

QUEEN ANNE'S COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 39x33 inches, 1916.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1909.

Geological Formations - Scale 1:62500, Contour interval 10 feet, Size 45x36 inches, 1915.
Topographic and Election Districts - Scale 1:62500 , Contour interval 10 feet, Size 45x36 inches, 1935.

ST. MARY'S COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 35x37 inches, 1929.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 in., 1909.

Geological Formations - Scale 1:62500, Contour interval 20 feet, Size 36x42 inches, 1903.
Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 36x41 inches, 1929.

SOMERSET COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 34x37 inches, 1925.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1910.

Topographic and Election Districts, - Scale 1:62500, Contour interval 10 feet, Size 36x39 inches, 1906.

TALBOT COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 10 feet, Size 35x51 inches, 1920.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1911.

Geological Formations, - Scale 1:62500, Contour interval 10 feet, Size 40x34 inches, 1916.
Topographic and Election Districts - Scale 1:62500, Contour interval 10 feet, Size 40x33 inches, 1926.

WASHINGTON COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 20 feet, Size 35x51 inches, 1920.
Forest Areas by Commercial Types - Scale 1:62500, Contour interval 20 feet, Size 52x34 inches, 1913.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1911.

Topographic and Election Districts - Scale 1:62500, Contour interval 20 feet, Size 52x34 inches, 1931.

WICOMICO COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 10 feet, Size 38x29 inches, 1935.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1914.

Topographic and Election Districts - Scale 1:62500, Contour interval 10 feet, Size 39x30 inches, 1905.

WORCESTER COUNTY

Agricultural Soils - Scale 1:62500, Contour interval 10 feet, Size 38x45 inches, 1929.
Forest Areas by Commercial Types- Scale 1:62500, Contour interval 10 feet, Size 36x35 inches, 1904.
Forest Areas by Commercial Types - Scale 1:87500, Size 11x14 inches,1914.

Topographic and Election Districts - Scale 1:62500, Contour interval 10 feet, Size 38x35 inches, 1935.

BALTIMORE CITY

Map - showing original shore lines and drainage, Scale 1 inch= 2000 feet. Size 29x34 inches, 1935.
Map - showing amount of overburden covering the underlying rock formation, Scale 1 inch = 2000 feet, Size 29x35 inches,1935.
Map - Showing properties, outlines, etc., 4 sheets, Scale 1 inch = 1000 feet, Contour interval 20 feet, each sheet size 24x29 inches, 1912 -1915

STATE OF MARYLAND

Map - Scale 6 mi. = 1 inch, Size 44x21 inch.
Map - Scale 8 mi. = 1 inch, Size 21x35 inch, 1913.
Map - Scale 20 mi.= 1 inch, Size 16x11 inch, 1913.

Map - Size 12x11 inches.
Map - Size 15x11 inches.
Map - Scale 1:187500, 3 sections, Size each section 32x52 inch, 1907.
Map - Scale 1:187500, 3 sections, Counties in color, Size each section 32x52 inch., 1907.
Map - Showing highways, steam and electric rail roads and steamboat lines in color, Scale 1 inch = 5 miles, Size 52x36 inches, 1920.
Map - Showing conditions of roads to date, special listing, Scale 1 inch = 5 miles, Size 52x36 inches, 1910.
Map - Showing surface elevations, Scale 1:380160, Size 44x26 inch, 1935.
Map - Showing Geological formations, Scale 1:380160, Size 44x26 inch, 1935.
Map - Showing Political divisions, Scale 1:380160, Size 44x26 inch., 1935.
Map - Showing Geological formations and Soils, Scale 8 mile = 1 inch. Size 35x21 inches, 1907.

STATES OF MARYLAND AND DELAWARE

Map - Showing average annual precipitation in inches, Scale 1:500000, Size 35x22 inches, 1921.
Map - Showing average annual temperature in degrees Fahrenheit, Scale 1:500000, Size 35x22 inches, 1921.
Map - Showing average number of days intervening between date of last freezing temperature in spring and date of first freezing temperature in fall, Scale 1:500000, Size 35x22 inches, 1921.

GEORGES CREEK

Map - Showing the location of mining properties and the areal extent of the Pittsburg "(Big Vein)" and lower coals, Scale 1:62500, Contour interval 30 feet, Size 32x11 inches, 1935.

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MARYLAND STATE ROADS COMMISSION County maps, in sections as shown, size each section 36x38 inches, scale 1 inch = 1/2 mile, enlarged from the Maryland Geological Survey Topographic and Election Districts sheets but not showing contours, printed on linen.

Allegany	in 3 sheets.
Baltimore	in 4 sheets.
Calvert	in 2 sheets
Caroline	in 3 sheets.
Carroll	in 3 sheets.
Cecil	in 3 sheets.
Charles	in 4 sheets.
Kent	in 3 sheets.

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BUREAU OF PLANS AND SURVEYS, BALTIMORE CITY, maps as designated, scale one inch equals 200 feet.

Topography - 38 sheets covering the old city, Size 30x32 inches, 1894, Atlas Sheets - 34 sheets covering the old city, Size 34x44 inches, 1914. Index Sheet - Scale 1 inch = 100 ft., Size 34x44 in., for all of the above sheets.

Note: The sheets covering the new annex are not yet published, but prints of the working tracings may be acquired, the index of these tracings is mounted and on file.

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PENNSYLVANIA WATER & POWER COMPANY, photostat index sheets of aerial survey made by Fairchild Aerial Survey Incorporated.

Index to exposures - Baltimore to Washington Area.
Index to exposures - Baltimore to Pennsylvanial line area.

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UNITED STATES COAST AND GEODETIC SURVEY geographic positions of the triangulation stations in Maryland, on 134 sheets listed below as to network locations.

Oblique Arc - 21 stations.
Eastern Oblique Arc - 8 stations.
Eastern Oblique Arc and 39° parallel - 9 stations.
Pittsburg Arc - 13 stations.
Providence R. I. to Norfolk, Va. - 12 stations.
Cape May, N. J. to Norfolk, Va. - 61 stations.
Maryland -Virginia Boundary to Ocean City - 15 stations.
Washington, D.C., to Freeland, Maryland - 121 stations.
Delaware - Pennsylvania Circular Boundary - 87 stations.
James River, Va., to Washington, D.C. - 52 stations.
Back River - 25 stations.
Potomac River - 37 stations.
Washington, D.C., and Vicinity - 52 stations.
Chesapeake Bay - 34 stations.
Severn River - 8 stations.
Gunpowder and Middle Rivers - 15 stations.
Vicinity of Washington, D.C. - 25 stations.
Crisfield to Elkton - 130 Stations.
Potomac River, Fort Humphreys to Washington - 81 Stations.

A photo print of a map of the States of Maryland and Delaware, Scale 8 miles = 1 inch., Size 35x21 inches, showing graphically the net work of the triangulation.

Also the plane coordinates for 104 of the above geographic positions.

MAPS ----*---

MAPS OF THE FOLLOWING CITIES AND TOWNS:

Baltimore - Scale 1 in. = 2000 ft., Size 28x34 in., 1933.
Barton - Scale 1 in. = 100 ft., Size 40x28 in., Blue Print, 1922.
Cumberland - Size 24x31 in., Litho Print, 1935, Scale 1 in. - 800 ft.
Easton - Scale 1 in. = 300 ft. Size 22x26 in., Litho Print., 1935.
Federalsburg - Scale 1 in.= 400 ft., Size 14x10 in., Print. 1932.
Hagerstown - Scale 1 in. = 600 feet, Size 35x24 in., Red Line print.
Perryville - Scale 1 in. = 200 feet, Size 33x24 in., 1923 print.

MAPS OF THE FOLLOWING SUB-DIVISIONS:

Blue prints of the following sub-divisions of the
CITYCO REALTY COMPANY, BALTIMORE, MARYLAND.

Abington Beach - Harford County.
Baltimore Highlands - Baltimore County.
Bodkin Plains - Anne Arundel County.
Chesaco Park - Baltimore, County.
East Sudbrook - Baltimore County
Gwynn Lake Park - Baltimore County
Hazelwood Farms - Baltimore County.
Idlewylde - Sections A and B - Baltimore County.
Long Beach - Baltimore County.
Margate - Anne Arundel County.
Maryland Manor - Baltimore County.
Midriver Park - Baltimore County.
Montrose Farms - Baltimore County.
Parkville Summit - Baltimore County.
Rosebank - Baltimore County.
Rosedale Terraces - Baltimore County.
Rosedale Gardens - Baltimore County.
Shoracres - Anne Arundel County.
Shoreland - Sections A and B - Anne Arundel County.
Truxton Heights - Anne Arundel County.
Twin River Beach - Sections A and B - Baltimore County.

Tracings made from plats:

Avalon Shores - Anne Arundel County - plat loaned by
Frank P. Babcock, Riverdale, Maryland.
Halethorpe - Baltimore County - Plat loaned by
Howard R. Ring, Halethorpe, Maryland.

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MISCELLANEOUS:

Hagerstown Municipal Airport - Scale 1 inch= 200 feet, size 30x21 inches,
Blue print, 1935.

PAMPHLETS AND PUBLICATIONS

DEPARTMENT OF COMMERCE, UNITED STATES COAST AND GEODETIC SURVEY, pamphlet Form, book size.

Paper binding -

Serial 453, United States Magnetic Tables and Magnetic Charts for 1925.

Serial 455, Results of Magnetic Observations in 1928.
Serial 457, Magnetic Declination in Delaware, Maryland, Virginia., West Virginia, Kentucky and Tennessee, with charts.
Serial 482, Results of Magnetic Observations in 1929.
Serial 540, 1932, Magnetic Declinations in the United States, 1930, with charts.
Serial 544, Results of Magnetic Observations in 1930.
Serial 575, Tide Tables Atlantic Ocean, 1936.
Special Publication 8, Formulas and Tables for the Computation of Geodetic Positions.
Special Publication 23, U. S. Coast and Geodetic Survey, Description of its work, methods and organization.
Special Publication 41, Use of Mean Sea Level as the Datum for Elevations.
Special Publication 67, Latitude Developments connected with Geodesy and Cartography.
Special Publication 71, Relation between Plane rectangular coordinates and Geographic Postions.
Special Publication 117, The Earth's Magnetism.
Special Publication 197, Practical Air Navigation and the use of the Aeronautical charts of the Department of Commerce.
Bulletin 307, Manual of Topographic Methods.

Cloth binding:

Special Publication 68, Elements of Map Projection.
Special Publication 114, Triangulation in Maryland.
Special Publication 120, Manual of First - Order Triangulation.
Special Publication 137, Traverse Manual.
Special Publication 138, Manual of Triangulation Computation.
Special Publication 140, Manual of First-order Leveling.
Special Publication 145, Manual of Second and Third order Triangulation.
Special Publication 193, Manual of Plan-Coordinate Computation.
Special Publication 195, Manual of Traverse Computation on the Traverse Mercator Grid.

DEPARTMENT OF INTERIOR, UNITED STATES GEOLOGICAL SURVEY. pamphlet form, book size.

Paper binding -

Bulletin 434, Results of Spirit Leveling in Delaware, District of Columbia, Maryland and Virginia, 1896 to 1909 inclusive.
Bulletin 563 Results of Spirit Leveling in Maryland.
Bulletin 644, Primary Traverse in Maryland and the District of Columbia.
Bulletin 689, Boundaries, areas, Geographic Centers and Altitudes of the United States and the Several States, with maps.
Bulletin 788, E Topographic Instructions of the U.S. Geological Survey.

UNITED STATES DEPARTMENT OF AGRICULTURE, BUREAU OF SOILS.
In cooperation with the Maryland Geological Survey and the Maryland Agricultural Experiment Station:

Soil Survey of each of the 23 counties in Maryland, in pamphlet form, book size, describing the area, climate, agriculture and soils, together with a soil map of the county folded in back of same.

DEPARTMENT OF AERONAUTICAL ENGINEERING OF SYACUSE UNIVERSITY, pamphlet form, book size.

Paper binding -

The following bulletins on Topographic Mapping by Aerial Photography:

Adaption of the principle of Parallax to Comparator and Photogoniometer Measurements, March 1931.
Supplemental Topics in Aerial Photogrammetry Concerning Computations based upon Comparator Measurements, November, 1933.
The Special Orientation of Aerial Photographs, February, 1935.